

Notice of Allowability

Application No.

10/602,070

Examiner

Tran N. Nguyen

Applicant(s)

GOROHATA ET AL.

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2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/29/04.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☒ The drawings filed on 24 June 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Tran N. Nguyen
Primary Examiner
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RESTRICTION/ELECTION RESPONSE

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. **Claims 1-14** drawn to structure of a stator with stator coil winding structural arrangement classified in class 310, subclass 179.
- II. **Claims 15-18** are drawn to production method of a stator with the process of making the stator coil winding arrangement, classified in class 29, subclass 596.

In response to the restriction requirement, **the applicant selected, with traverse, claims 1-14 of group I.** The election is hereby acknowledged.

The applicant argues that the method and the structure claims are not independent and distinct from one another because both the structure and the method claim groups are related to the same invention.

In response to this argument, even though the structure and the method groups both are related to the same invention, the two groups of claims are independently distinct in terms of the process of making and the structure of the device.

The fields of search for a method of making a device and for a structure of the device, i.e., the product, are not coextensive, and determinations of patentability for claims of a method of making a device and claims of the device's structure are different. In the determinations of patentability for claims of a method of making a device, the fabrication process includes its sequential order of fabricating steps and/or tools used in these steps of forming the device are considered significant.

On the contrary, in the determinations of patentability for claims of the device's structure the limitations of device's elements and their structural relationships as well as their functional/operational relationships are considered significant. In other words, in the device claimed invention, or in a product-by-process feature of a device, the method of forming the device is not germane to the issue of patentability of the device itself. (*In re Thorpe*, 227 USPQ 964, 966.)

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Therefore, The fields of search for a method of making a device and for a structure of the device, i.e., the product, are not coextensive and the patentability consideration for patentabilities of the structure claimed invention and method claimed invention are different and independent.

This is the reason why there are two different and separate classifications for the method of forming a dynamoelectric machine and a structure thereof.

Thus, the restriction, which is set forth in the previous Office Action, is deemed to be proper and hereby made FINAL.

According to 37 CFR 1.141, the applicant hereby has the right to file a divisional application for the non-elected invention.

Examiner's Amendment

An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to applicants, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it must be submitted no later than the payment of the Issue Fee.

Please change the following:

In the claim:

Cancel claims 15-18

These claims are drawn to a non-elected invention. The applicant hereby has the right to file a divisional application for the non-elected invention.

Allowable Subject Matter

Claims 1-14 are allowed.

Reason for Allowability

The following is an examiner's statement of reasons for allowance:

In combination with other limitations recited in the claims, the primary reason for the allowance is the including the following particular limitations of a sequentially joined-segment stator coil of a rotary electrical machine comprising:

a stator core having opposed ends and slots formed at given intervals in a circumferential direction of the stator core, each of the slots defining therein even segment-inserted positions which are aligned in a radius direction of said stator core; and a plurality of segments placed in the slots of said stator core, said segments being joined in sequence to form turns of each of M (=an integer more than two) phase coils, each of said segments including a pair of conductor portions each of which is inserted into one of two of the slots spaced from each other at a given interval, a head portion extending from the pair of conductor portions outside one of the ends of said stator core to form a segment head-side coil end, and a pair of end portions each of which extends from one of the pair of conductor portions outside the other end of said stator core to form a segment end-side coil end, each of the head portions being made up of a substantially U-shaped tip portion and a pair of slant portions which continue from ends of the head portion, slant to a circumferential and an axial direction of said stator core, and lead to the conductor portions, respectively; each of the end portions being made up of slant end portions slanting from said two of the slots to the circumferential and axial directions and tips each of which continues from one of the slant end portions and is joined to one of the tips of the end portions of another of the segments, the segment head-side coil end including a plurality of sets of the head portions arrayed in the radius direction of the stator core, as viewed in the circumferential direction of the stator core, the segment end-side coil end including a plurality of sets of the end portions arrayed in the radius direction, as viewed in the circumferential direction of the stator core, wherein

each of the tip portions of the head portions of said segments bulges more than a corresponding one of the pairs of conductor portions in the radius direction of said stator core, a radius-wise pitch between two of the tip portions adjacent to each other in the radius direction being greater than a width of the tip portions in the radius direction, and wherein a radius-wise pitch between the slant portions of two of the head portions arrayed adjacent to each other in the

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radius direction of said stator core is smaller than the width of the tip portions in the radius direction, as recited in claim 1, or

wherein each of the tip portions of the head portions of said segments bulges more than a corresponding one of the pairs of conductor portions in the radius direction of said stator core, a radius-wise pitch between two of the tip portions adjacent to each other in the radius direction being smaller than a width of the tip portions in the radius direction, and wherein sections of the tip portions having a maximum width in the radius direction of said stator core are shifted in location from each other in the axial direction of said stator core, as recited in claims 7 and 11.

Comparing to the prior-art of the record, US Patents 6,166,461 or 5,955,804 or 4908541, each prior art reference discloses the tip end portion of the winding being spaced apart at a predetermined angle mainly for the purpose of enhancing cool air circulation to reduce generated heat therein. However, none of the prior art references of the record, either stand-alone or in combination, has taught or suggest the above-mentioned features in combination with other limitations recited in the claims of the present application.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

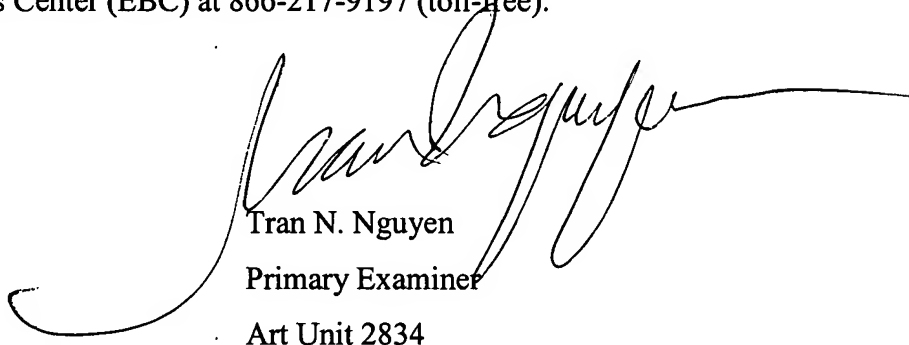
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is (571) 272-2030. The examiner can normally be reached on M-F 7:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tran N. Nguyen
Primary Examiner
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